

WHAT IS CLAIMED IS:

1 1. A freight elevator landing door assembly comprising
2 a generally rectangular panel that slides vertically for
3 opening and closing movement, a pair of spaced guide rails
4 adapted to be fixed in parallel alignment to the hoistway
5 walls adjacent opposite vertical sides of an opening served
6 by the door panel, the guide rails each having
7 longitudinally extending vertical faces, the door panel
8 having spaced vertical edges adjacent the guide rails and
9 guide elements adjacent said vertical edges for engaging the
10 guide rails so that the door is guided for movement in a
11 vertical plane by said guide rails, a safety brake fixed on
12 the door panel adjacent each of its vertical edges, the
13 safety brake including a caliper block that extends over
14 opposed vertical faces of the adjacent guide rail and is
15 adapted to be fixed relative to the door, a separate chain
16 for suspending the weight of the door panel adjacent each
17 vertical edge, a wedging element moveable vertically in the
18 caliper block between an inactive position and an active
19 position where it frictionally locks the caliper block and,
20 therefore, the door panel to the guide rail, a biasing
21 spring urging the wedging element to move from the inactive
22 position to the active position, and a control element
23 normally holding the wedge element in an inactive position,
24 the control element being responsive to loss of tension in
25 the chain to release the wedging element and allow it to
26 move to the active position under the influence of the
27 biasing spring.

1 2. A freight elevator landing door assembly as set
2 forth in claim 1, wherein the wedging element is a roller
3 cam.

1 3. A freight elevator landing door assembly as set
2 forth in claim 1, wherein the control element is a tensioned
3 cable connected to the wedging element and arranged to be
4 released when an associated suspension cable breaks.

1 4. A freight elevator landing door assembly as set
2 forth in claim 3, wherein the cable is tensioned by a
3 resistance force in the associated suspension chain.

1 5. A freight elevator landing door assembly as set
2 forth in claim 4, including a body that bears laterally
3 against the suspension chain to develop said resistance
4 force.

1 6. A safety brake device for a vertically sliding
2 elevator door comprising a caliper block having a slot for
3 receiving a door guide rail, the slot having opposed
4 surfaces with one of the surfaces being tilted towards the
5 other with reference to an upward direction, a roller cam
6 receivable in the slot adjacent the tilted surface, a spring
7 arranged to bias the roller cam upwardly in the slot, a
8 control element normally restraining the roller cam against
9 the bias of the spring to a lower portion of the slot where
10 there is sufficient clearance to receive both the roller cam
11 and a guide rail flange without interference, the control
12 element being arranged to release the roller cam in the
13 event of a failure of an associated chain suspending the
14 door whereby the spring is effective to move the roller cam

- 15 towards a location in the slot where it wedges tightly
- 16 against the guide rail flange and prevents relative downward
- 17 vertical movement between the block and guide rail flange.